

THIS WEEK IN CHEMISTRY

28TH JUNE - 4TH JULY 2015

LEGO PLANS TO REPLACE OIL-BASED PLASTICS

• Lego plans to spend \$150 million to replace the oil-based plastics it currently uses to make its bricks with more environmentally friendly alternatives. It plans to make the switch by 2030. Currently, one of the key components is acrylonitrile-butadiene-styrene (ABS).



CONTACT LENS COATING FIGHTS EYE INFECTIONS

• Researchers have come up with a process to coat contact lenses with an antimicrobial film which could help combat eye infections. The coating uses four chemical components, and remains on the lens for up to seven days.



ROSE SCENT PRODUCTION ROUTE UNCOVERED

• Geraniol produces much of a rose's scent, but its production in roses has been found to be different to many other plants. Researchers found scented roses expressed a specific gene, which codes for a particular enzyme, at greater levels than those with less scent.



PEPPERMINT OIL CAPSULES PUNCH THROUGH BIOFILMS

• The terpenes in peppermint oil can effectively kill bacteria. By encapsulating the oil (and cinnamaldehyde) in a shell of silica nanoparticles, researchers found the resultant particles could easily penetrate bacterial biofilms and destroy the bacteria present.



MATERIAL IS A CONDUCTOR & INSULATOR AT THE SAME TIME

• Researchers have observed that samarium hexaboride can behave as both a conductor and insulator at the same time (at very low temperatures). That the bulk material can exhibit this dual character challenges current understandings of material behaviour.



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